

AI -- A system and method for emulating the functional behavior of a two-button mouse-type computer input device is described. A predetermined input generated by digitizing pen and a digitizing writing surface is received, and a user interface having a plurality of soft buttons is displayed. The plurality of soft buttons provides selectable functionality of a two-button mouse-type computer input device. Preferably, the plurality of soft buttons includes a right-button function, a shift function, a control function, an alternate function and a bull's-eye function. --.

In the Specification:

Please replace the following paragraphs as indicated:

Please replace the paragraph spanning page 1, line 3, through page 2, line 16, with the following:

PR -- The present application claims priority to U.S. Provisional Patent Application Serial No. 60/247,843, entitled Mouse Input Panel And User Interface, filed on November 10, 2000, which is hereby incorporated by reference as to its entirety. The present application is related to U.S. Provisional Patent Application Serial No. 60/247,182, entitled Method and Apparatus For Improving the Appearance of Digitally Represented Handwriting, filed on November 10, 2000; to U.S. Provisional Patent Application Serial No. 60/247,841, entitled Highlevel Active Pen Matrix, and filed on November 10, 2000; to U.S. Provisional Patent Application Serial No. 60/247,973, entitled Selection Handles in Editing Electronic Documents, and filed on November 10, 2000; to U.S. Provisional Patent Application Serial No. 60/247,842, entitled Insertion Point Bungee Space Tool, and filed on November 10, 2000; to U.S. Patent Application Serial No.

09/768,171, entitled Selection Handles In Editing Documents, and filed January 24, 2001; to U.S. Provisional Patent Application Serial No. 60/247,844, entitled Simulating Gestures of a Mouse Using a Stylus and Providing Feedback Thereto, and filed on November 10, 2000; to U.S. Provisional Patent Application Serial No. 60/247,400, entitled System and Method For Accepting Disparate Types Of User Input, and filed on November 10, 2000; to U.S. Provisional Patent Application Serial No. 60/247,972, entitled In Air Gestures, and filed on November 10, 2000; to U.S. Patent Application Serial No. 09/759,202, entitled In-Air Gestures For Electromagnetic Coordinate Digitizers, and filed January 15, 2001; to U.S. Provisional Patent Application Serial No. 60/247,831, entitled Mouse Input Panel Windows Class List, and filed on November 10, 2000; to U.S. Patent Application Serial No. 09/801,880, entitled Mouse Input Panel Windows Class List, and filed March 9, 2001; to U.S. Provisional Patent Application Serial No. 60/247,843, entitled Mouse Input Panel and User Interface, and filed on November 10, 2000; to U.S. Provisional Patent Application Serial No. 60/247,479, entitled System and Method For Inserting Implicit Page Breaks, and filed on November 10, 2000; to U.S. Patent Application Serial No. 09/736,170, entitled High Level Active Pen Matrix, and filed on December 15, 2000; to U.S. Patent Application Serial No. 09/741,107, entitled Mode Hinting/Switching, and filed on December 21, 2000; to U.S. Provisional Patent Application Serial No. 60/247,847, entitled Tablet Computer and its Features, and filed on November 10, 2000; and to U.S. Patent Application Serial No. 09/750,288, entitled Anchoring, Rendering, Reflow & Transformations, filed December 29, 2000, each of which is incorporated by reference herein as to their entireties.

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Please replace the paragraph at page 5, lines 1-7, with the following:

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-- Computers that are configured without traditional keyboard and mouse input devices and that have relatively large displays are sometimes referred to as tablet PCs. More generically, tablet PCs belong to the group of stylus-based computing systems. These computing systems are typically configured so that a digitizer is combined with or overlaid upon the display. The digitizer senses the coordinates of a pen tip as the pen is moved in contact with the display surface. When electromagnetic displays and pens are used, the stylus-based computing system can sense proximity of the pen to the display in addition to sensing just contact between the pen and the display. --.

Please replace the paragraph at page 6, lines 3-17, with the following:

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-- The present invention also provides a tablet PC having a digitizing writing surface that generates a predetermined output in response to, for example, a predetermined in-air gesture made with a digitizing pen, and a display that displays a user interface having a plurality of soft buttons in response to the predetermined output. The plurality of soft buttons provides selectable functionality of a two-button mouse-type computer input device. Preferably, the plurality of soft buttons includes a right-button function, a shift function, a control function, an alternate function and a bull's-eye function. The digitizing writing surface receives a user selection of at least one

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of the plurality of soft buttons, and the user interface is hidden from view on the display when the user selection of a selected soft button is received. When the digitizing display receives a user selection for the bull's-eye function; the stylus-based computing system sends a right-button event to an application displayed below the user interface on the display in response to the user selection for the bull's-eye function. An inactivity timer is started when the user interface is displayed on the display, and the user interface is hidden from view on the display when a predetermined amount of time elapses without receiving a user selection of at least one of the plurality of soft buttons. --.

Please replace the paragraph on page 7, lines 2-6, with the following:

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-- Aspects of the present invention are illustrated by way of example and not limitation in the accompanying figures in which like reference numerals indicate similar elements and in which:

Figure 1 shows a schematic diagram of a general-purpose digital computing environment that can be used for implementing various aspects of the invention; --.

Please replace the paragraph on page 7, lines 9-17, with the following:

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-- Figure 3 shows an exemplary user interface (UI) that can be used for emulating the functional behavior of a two-button mouse-type computer input device according to aspects of the present invention;

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Figure 4 is a functional block diagram showing the functional relationship of an in-air gesture recognizer according to aspects of the present invention with a pen digitizer and an application program; and

Figure 5 shows a flow diagram for a process for detecting an in-air gesture and emulating the functional behavior of a two-button mouse-type computer input device according to aspects of the present invention. --.

Please replace the paragraph on page 11, lines 6-16, with the following:

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-- Figure 2 illustrates a stylus-based computing system 201 that can be used in accordance with various aspects of the present invention. Any or all of the features, subsystems, and functions in the system of Figure 1 can be included in the computer of Figure 2. Stylus-based computing system 201 includes a large display surface 202, e.g., a digitizing flat panel display, preferably, a liquid crystal display (LCD) screen, on which a plurality of windows 203 is displayed. Using stylus 204, a user can select, highlight, and write on the digitizing display area. Examples of suitable digitizing display panels include electromagnetic pen digitizers, such as the Mutoh or Wacom pen digitizers. Other types of pen digitizers, e.g., optical digitizers, may also be used. Stylus-based computing system 201 interprets marks made using stylus 204 in order to manipulate data, enter text, and execute conventional computer application tasks such as spreadsheets, word processing programs, and the like. --.

Please replace the paragraph spanning pages 12, line 19, through page 13, line 6, with the following:

88 -- The MIP of the present invention can be invoked, i.e., made to appear on the display of the stylus-based computing system, in a number of different ways. One way is for a user to press a button that represents the MIP on a toolbar visible on the display. This, however, requires the user's hand to move away from the document or application to which the user's attention is focused to locate and depress the button that invokes the UI element. Another approach that has similar shortcomings is to use a hardware button on the housing of the stylus-based computing system. The preferred alternative for invoking the MIP or other UI elements, or for affecting any other system control or input, is the use of the gesture of the present invention. --.

Please replace the paragraph spanning page 17, line 17, through page 18, line 7, with the following:

89 -- Figure 5 shows a flow diagram 500 for a process for detecting an in-air gesture and emulating the functional behavior of a two-button mouse-type computer input device according to aspects of the present invention. The process begins at step 501. At step 502, it is determined whether the pen is in proximity to and in the air above the digitizing writing surface. If not, the process remains at step 502 until the pen is determined to be in proximity to and in the air above the digitizing writing surface, at which time flow continues to step 503 where the coordinate information stream generated by the in-air gesture of the pen is recorded in buffer 406 (Figure 4).

Flow continues to step 504, where it is determined whether the in-air pen movement has stopped.

79 If not, flow continues to step 503, where the recording of the coordinate information stream generated by the in-air gesture of the pen continues in buffer 406. --.

Please replace the paragraph spanning page 18, line 20, through page 19, line 11, with the following:

810 -- While the present invention does not rely on complex in-air gestures for emulating the functional behavior of a two-button mouse-type computer input device, other in-air gestures other than spike movements can alternatively be utilized by aspects of the present invention. For example, other suitable in-air gestures that can be used with the present invention include circularly, triangularly, or rectangularly shaped motions, in addition to a saw tooth motion or a reciprocating motion. Moreover, a UI menu or control window other than a mouse-type input panel could be emulated by using an in-air gesture that is detected by aspects of the present invention. Exemplary UI menus or control windows that could be controlled by in-air motions detected by aspects of the present invention include a file management menu, an edit function menu, and a formatting menu. Further still, an in-air gesture according to aspects of the present invention can be used for generating specific keystrokes, such as a space, backspace and carriage return, or user definable keystrokes and/or sequences of keystrokes. --.
